User's Guide
Atari REVERSAL

REVERSAL is a game of strategy which in several forms has been known for centuries, played by young and old alike. It combines simple, easy-to-learn rules with a nearly endless variety of challenges. No two games are ever quite the same. Although each game has sixty half-moves, many games hang in the balance until the last three or four moves.

REVERSAL is played on a chess-like board, eight squares to a side. The object of the game is simple: to trap your opponent's pieces between yours so that they reverse or flip to your color, leaving your pieces occupying the majority of the squares when the board is filled.

HARDWARE REQUIREMENTS

You will need an Atari 400 or 800 with at least 16K of memory, a video monitor and a cassette recorder.

LOADING INSTRUCTIONS

1. Turn OFF the Atari and remove all cartridges.
2. Insert the REVERSAL cassette and rewind the tape.
3. Turn ON the Atari while holding down the START key.
4. At the tone, release the START key and press PLAY on the recorder.
5. Press any key except BRK or RESET on the Atari.
6. When the title page appears, press the recorder STOP button.

How to Play Reversal

REVERSAL can be played by two people, or one person against the computer. One player has black pieces; the other has white. Black always goes first, which in a very close game can be of strategic importance.

The board and its coordinates use chess notation. Every game begins with the four center squares filled as follows:
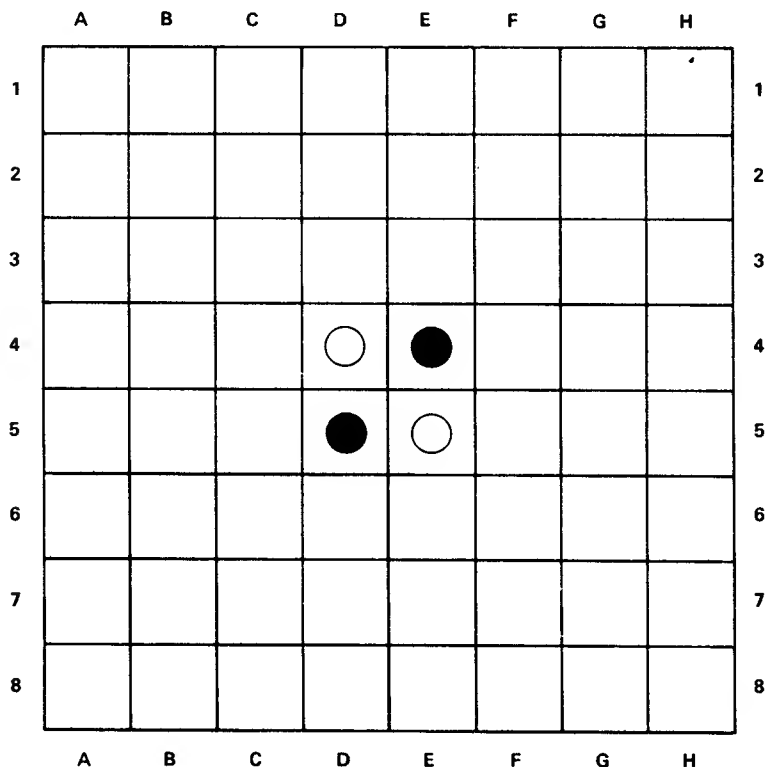
On each turn you must place a piece on a square so as to trap —
in a horizontal, vertical or diagonal direction — at least one of your
opponent's pieces between a square you already occupy and the new
square you have selected. You must trap an opposing piece in order
to move; if you cannot, you forfeit the move.

As the game progresses and the board fills, you will find occasions
when proper placement of your piece will trap opposing pieces in
two or (very rarely) three directions simultaneously. In the example
below, Black's new piece placed on D7 traps White's pieces both
vertically and diagonally.
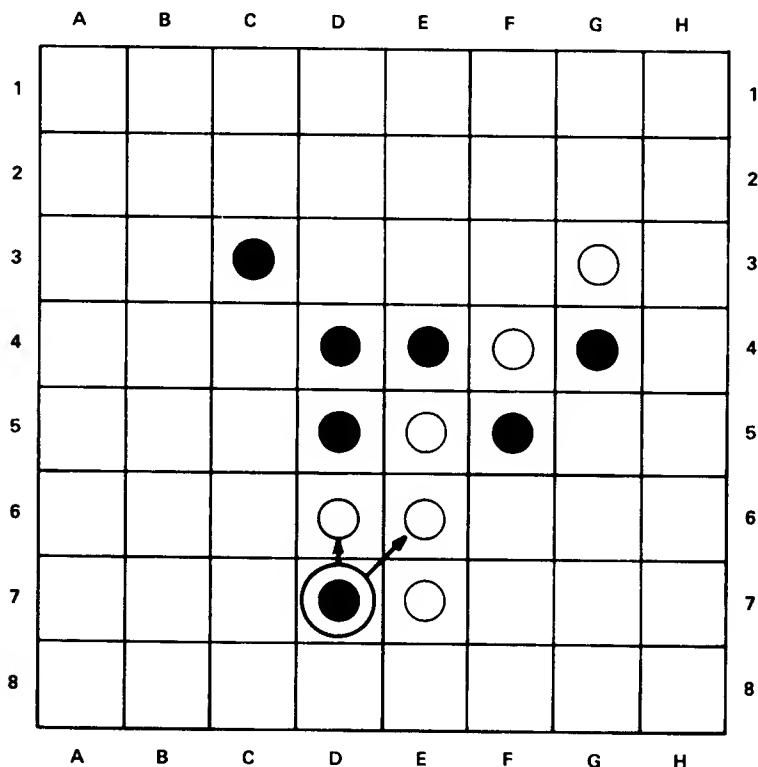
Players alternate turns until the board is completely filled with pieces or until neither player can move. At the game's conclusion, the player with the most pieces is the winner.

HOW TO RUN REVERSAL

The first screen option indicates three possible modes:

NEW GAME, CHANGE BOARD, OR MONITOR?
(G, C, M)

Respond as follows:

Press:
> **G** **RETURN** for a new game
> **C** **RETURN** to change a board for analysis
> **M** **RETURN** for two people to play, with computer monitor

WHEN YOU CHOOSE NEW GAME

The program will ask you:

YOUR COLOR? (B,W):

Press **B** or **W**, as you wish, but remember that Black moves first.
Press **RETURN** to complete your choice.
The next option to appear is:

STRATEGY? BEGINNER, INTERMEDIATE, ADVANCED
(B, I, A):

Press the letter for the level of strategy you wish (followed by **RETURN**)
The program will then ask:

LEVEL OF PLAY? (1-9):

Press the number of the level you wish (followed by **RETURN**).
Higher levels increase the program's computation time and playing skill. Approximate times for each level are as follows:

Level	Computer's Response Time
1	2.5 seconds
2	5 seconds
3	10 seconds
4	15˙ seconds
5	30 seconds
6	1 minute
7	3 minutes
8	10 minutes
9	30 minutes

Strategy and skill levels are interdependent. The skill level represents roughly the number of possible moves ahead the computer is looking; strategy limits how effectively the computer uses that data. The levels and their relation to each other are:

Beginner 1 ——————————— 9
Intermediate 1 ——————————— 9
Advanced 1 ——————————— 9

When you have chosen the level of play, the game begins. REVERSAL opens with the Text board. Press **ESCape** to toggle between Text and Game boards.

Your Move
With the Game board on the screen, you will see one of the squares where you can make a legal move blinking. Use joysticks or the ◀ and ▶ keys to cycle the cursor through all legal moves. In a solo game, use joystick 1. Press **RETURN** or the joystick button to complete your move.

Computer's Move
When the computer has selected its move, it blinks a square and sounds a tone. Press **RETURN** or the joystick button to complete the computer's move.

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The Score
The current score for both White and Black is on constant display on the Game board at the upper corners. The color in the lead and the extent of the lead are indicated by the smiles or frowns on the playing pieces.

Kibitz:
A hint to the player, giving what the computer thinks is the best move, is available on levels 2-9. To get the computer's suggestions press **CTRL K**.

Take-Back Feature
REVERSAL gives you the option of taking back any move of the game. At any time during the game (even when the game has ended) you can take back one or any number of moves. You can even back up all the way to the starting position. To take back a move press **CTRL B**. The last piece played will be removed and all flips will be undone. The score will be adjusted to reflect the changes.

Each take-back removes one piece and restores all flips for that piece. At any point you have the option of taking back more moves or of playing from that position. If you have taken back one of the computer's moves, you now have the option of making a move of your choosing in its place. The computer will accept your choice for him. It then becomes your turn to play one of your pieces. Play then resumes in the normal way.

NOTE: If you request take-back, while the computer is blinking its move choice, the computer's move choice is erased **and** your last move is taken back.

Level
You can change the level number at any point in the game by holding the **SHIFT** key down and entering the level number of your choice. If you select a new level while the computer is thinking, that level will not take effect until the following move. The Level # is displayed on the text screen in the upper right hand corner.

To End a Game

At any point in the game you can return to the initial list of options:

NEW GAME, CHANGE BOARD, OR MONITOR?
(G, C, M)

If you have the text page displayed, press CTRL R. If you have the board displayed, first press **ESC** to bring up the text page, then press **CTRL R** to bring up the options list. In either case, the program will respond at once, aborting even the deepest search (the game board will be re-arranged because of the search that was in progress).

WHEN YOU CHOOSE CHANGE BOARD

You can set up any board configuration you desire. If you were already in the middle of a game, the board will be displayed just as you left it. A square will be blinking.

Press the � key or move joystick right to leave the contents of the square unchanged and blink the next square to the right on the same row. If you are already at the rightmost square, it wraps around to the leftmost square in the same row and blinks that square.

Press the ◄ key or move joystick left to leave the contents of the square unchanged and blink a square in the leftward direction. It wraps around to the rightmost square in a similar manner.

Press the ↑ key or move joystick up to leave the contents of the square unchanged and blink the next upward square in the same column. If you are already at the topmost square it wraps around to the bottommost square in the same column and blinks that square.

Press the ↓ key or move joystick down to leave the contents of the square unchanged and blink the next downward square in the same column. It wraps to the top in a similar manner.

Press **W** to place a white piece on the square, or **B** to place a black piece.

Press any key not otherwise listed here to empty the square.

Press **RETURN** to terminate the blinking cycle and return you to the text page. You will then be asked:

COLOR TO MOVE NEXT? (B,W):

Respond with **B** or **W** (followed by **RETURN**). Next you will be asked:

MOVE NUMBER (NN):

The machine will start recording moves from this number on the text page. Your next prompt is:

YOUR COLOR? (B,W):

Press **B** or **W** (followed by **RETURN**). Next you are asked:

STRATEGY: BEGINNER, INTERMEDIATE, ADVANCED (B,I,A):

Enter **B**, **I**, or **A** (followed by **RETURN**). Finally you are asked:

LEVEL OF PLAY? (1-9):

Enter a number from 1 to 9 for your desired level. You are now ready to play. Just press **ESC** to return to the board display.

WHEN YOU CHOOSE MONITOR

Monitor mode permits game play between two people. The play is exactly as in New Game, but all move choices are left up to the players.

To Enter a Move:

Black moves first. On the Game board, a square blinks where it is legal for black to move. The board can be cycled through all legal moves using the **LEFT** and **RIGHT ARROW** keys. Press **RETURN** to complete the move.

It is now White's turn. Again a square blinks on the Game board where it is legal for White to move. The board can be cycled as before and the move entered in the same way. Play alternates between Black and White.

The score, move list, and take-back are the same as for a game between computer and human. Level and kibitz features do not apply. The game can be terminated by a **CTRL R** just as to end a computer versus human game.

ADDITIONAL FEATURES

Smile Suppression: Press **CTRL F** to clear the faces; press again to restore them.

Cursor Suppression: Press **CTRL C** to stop the cursor from flashing; press **CTRL C** again to restore it.

STRATEGY TIPS

1. Do not always go for the move that flips the most pieces. Examine the board and check the consequences of a move before making it.
2. In general, the squares on the outside perimeter (with the exception of spaces adjacent to corners) are valuable since a piece there can be trapped in only two different directions.
3. The squares on the next to the outside rows are, in general, dangerous since they give your opponent a chance to move to the outside row.
4. Try to get the four corner squares. A disk in the corner can not get trapped between two pieces and, therefore, **never** can get flipped. From this position, you have the ability to spread out from the corner and rapidly take control. However, possession of a corner is **not** a guarantee of winning, so be careful.
5. Be careful of moving into the squares directly adjacent to the corners. This gives the opponent easier access to valuable corner squares.

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QUESTIONS AND COMMENTS

Editors and authors at Hayden are constantly looking for ways to improve products like REVERSAL. We welcome your questions and comments, which should be sent to:

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